

1
2
3
4
5
6
7 UNITED STATES DISTRICT COURT
8 WESTERN DISTRICT OF WASHINGTON
9 AT SEATTLE

10 CALIFORNIA EXPANDED
11 METAL PRODUCTS COMPANY,
12 et al.,

13 Plaintiffs,

14 v.

15 JAMES A. KLEIN, et al.,

Defendants.

CASE NO. C18-0659JLR

CLAIM CONSTRUCTION
ORDER

16 **I. INTRODUCTION**

17 This is an order on claim construction in a patent infringement action involving
18 four related patents: U.S. Patent No. 7,681,365 (“the ’365 Patent”), U.S. Patent No.
19 7,814,718 (“the ’718 Patent”), U.S. Patent No. 8,136,314 (“the ’314 Patent”), and U.S.
20 Patent No. 8,151,526 (“the ’526 Patent”) (collectively, “the Patents”). Plaintiffs
21 California Expanded Metal Products Company and Clarkwestern Dietrich Building
22 Systems, LLC (d/b/a ClarkDietrich Building Systems) (collectively, “Plaintiffs”) allege

1 that Defendant James A. Klein, BlazeFrame Industries, Ltd., and Safti-Seal, Inc.
2 (collectively, “Defendants”) have infringed the Patents. (Compl. (Dkt. # 1) ¶¶ 82-85,
3 95-98.) The parties dispute the construction of four claim terms. (Jt. Claim Constr. Stmt.
4 (Dkt. # 92).) The court has reviewed the parties’ claim construction briefs (Pls. Op. Br.
5 (Dkt. # 93); Defs. Op. Br. (Dkt. # 94); Pls. Resp. (Dkt. # 95); Defs. Resp. (Dkt. # 96)), all
6 materials filed in support of the claim construction briefs, the relevant portions of the
7 record, and the applicable law. The court also heard from counsel at a *Markman* hearing¹
8 on March 22, 2019. (3/22/19 Min. Entry (Dkt. # 97).) Being fully advised, the court
9 construes the disputed terms as set forth below.

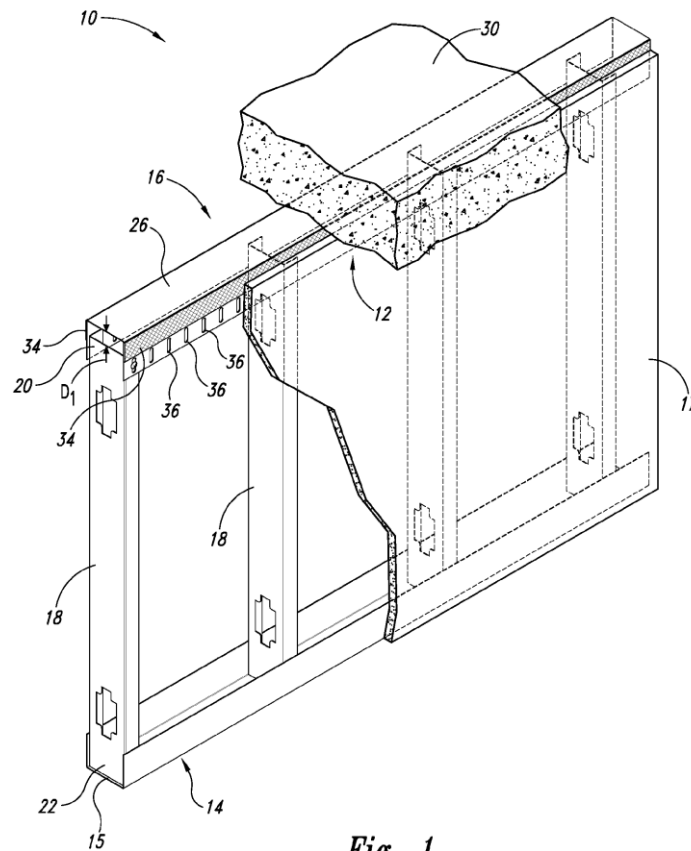
10 II. BACKGROUND

11 The Patents cover head-of-wall assemblies used in commercial construction to
12 prevent the spread of smoke and fire. (*See* Trojan Decl. (Dkt. # 93) ¶ 2, Ex. 1 (“’365
13 Patent”); *id.* ¶ 3, Ex. 2 (“’718 Patent”); *id.* ¶ 4, Ex. 3 (“’314 Patent”); *id.* ¶ 5, Ex. 4 (“’526
14 Patent”).) As shown in Figure 1 of the ’365 Patent, the inventive head-of-wall assembly
15 [10] comprises a footer track [14] and a header track [16], the top of which is adjacent to
16 the ceiling [30]. (’365 Patent at Fig. 1; *id.* at 4:5-7.) Sheet-metal studs [18] are
17 positioned vertically between the header and footer tracks to frame walls. (*Id.* at Fig. 1;
18 *id.* at 4:7-14.)

19 //

20 //

21
22 ¹ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).



As Figure 2 of the '365 Patent illustrates, the header [16] is a “U”-shaped metal track: it comprises a horizontal web [26] that is connected to a pair of downward-facing sidewalls [28]. (*Id.* at Fig. 2; *id.* at 4:40-44.) Like all the Patents, the '365 Patent features “an elongated intumescent strip” [34] that is “affixed lengthwise” to at least one of the outer sidewall surfaces. (*Id.* at Fig. 2; *id.* at 4:51-53.) When exposed to heat, the intumescent material expands to fill the gap between the wallboard and the ceiling, preventing smoke and fire from penetrating adjacent areas. (*See, e.g., id.* at Abstract.)

//

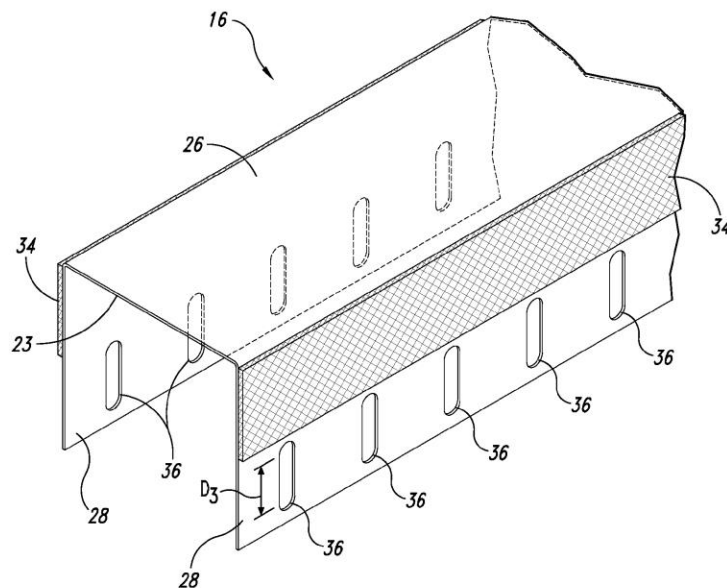


Fig. 2

The parties dispute the meaning of four claim terms: (1) “intumescent strip”; (2) “affixed lengthwise on at least one of the outer sidewall surfaces”; (3) “inorganic filler”; and (4) “dispersed in a emulsion of polyvinyl acetate or silicone.” (*See generally* *Jt. Claim Constr. Stmt.*) The first two disputed claim terms appear in all four Patents. The latter two disputed claim terms appear only in the ’314 Patent, which, uniquely among the Patents, claims an intumescent strip with a specific composition. (*See* ’314 Patent at 10:29-33.)

//

//

III. DISCUSSION

A. Law on Claim Construction

The court is solely responsible for construing patent claims. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). The court construes claims as a matter of law, although the court may make subsidiary factual findings regarding extrinsic evidence. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, --- U.S. ---, 135 S. Ct. 831, 836-38, 840-42 (2015). In practice, executing the *Markman* mandate means following rules that rank the importance of various sources of evidence that disclose the “true” meaning of claim terms.

The Federal Circuit summarized its view of proper claim construction in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Although the case focused on the role of dictionaries in claim construction, it also reviewed the claim construction process. *See id.* Intrinsic evidence, which includes the patent and its prosecution history, is the primary source from which to derive a claim’s meaning.² *Id.* at 1314. The court’s task is to determine the “ordinary and customary meaning” of the terms of a claim in the eyes of a person of ordinary skill in the art on the filing date of the

² A patent includes three parts: (1) a “written description,” which consists of an often lengthy exposition of the background of the invention, at least one embodiment of the invention, and other written material that assists in understanding how to practice the invention; (2) in most cases, a set of drawings that illustrates portions of the written description; and (3) the claims, which delimit the scope of the invention. *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1274 (Fed. Cir. 1992). Together, these three components make up the patent’s “specification.” *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1384 (Fed. Cir. 1999); 35 U.S.C. § 112. Although 35 U.S.C. § 112 refers to the claims as part of the specification, many courts and practitioners use the term “specification” to refer to all portions of a patent except the claims. *See* 35 U.S.C. § 112(b).

1 patent. *Id.* at 1313 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582
2 (Fed. Cir. 1996)). In its review of intrinsic evidence, the court should begin with the
3 language of both the asserted claim and other claims in the patent. *Phillips*, 415 F.3d at
4 1314; *see also Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d
5 1111, 1116 (Fed. Cir. 2004) (“[C]laim construction analysis must begin and remain
6 centered on the claim language itself.”).

7 The court must read claim language in light of the remainder of the patent’s
8 specification. *Phillips*, 415 F.3d at 1316 (explaining that “the specification necessarily
9 informs the proper construction of the claims”). The specification acts as a
10 “concordance” for claim terms and is thus the best source beyond the claim language for
11 understanding those terms. *Id.* at 1315. The inventor is free to use the specification to
12 define claim terms as he or she wishes, and the court must defer to the inventor’s
13 definitions. *Id.* at 1316 (“[T]he inventor’s lexicography governs.”). The court should
14 “rely heavily” on the specification in interpreting claim terms. *Id.* at 1317. The court
15 should not, however, commit the “cardinal sin” of claim construction—impermissibly
16 reading limitations from the specification into the claims. *Id.* at 1320 (citing *SciMed Life*
17 *Sys. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001)).
18 Although a court should limit the meaning of a claim where the “specification makes
19 clear at various points that the claimed invention is narrower than the claim language
20 might imply,” the court must not read particular embodiments and examples appearing in
21 the specification into the claims unless the specification requires it. *Alloc, Inc. v. Int’l*
22 *Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003); *Constant v. Advanced Micro-*

1 *Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988). Additionally, although figures
2 illustrating the invention may be used in construing claims, “the mere fact that the patent
3 drawings depict a particular embodiment of the patent does not operate to limit the claims
4 to that specific configuration.” *Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*, 318 F.3d 1143,
5 1148 (Fed. Cir. 2003).

6 More recently, the Federal Circuit has continued to emphasize the importance of
7 reading the claims in the context of the specification and prosecution history.³ *Laryngeal*
8 *Mask Co. Ltd. v. Ambu*, 618 F.3d 1367, 1370 (Fed. Cir. 2010) (“The words of a claim are
9 generally given their ordinary and customary meaning as understood by a person of
10 ordinary skill in the art in question at the time of the invention when read in the context
11 of the specification and prosecution history.”). Although the patent’s prosecution history
12 is also intrinsic evidence, it is generally “less useful for claim construction purposes” than
13 the specification. *Phillips*, 415 F.3d at 1317.

14 Finally, the court can consider extrinsic evidence, “including expert and inventor
15 testimony, dictionaries, and learned treatises.” *Id.* (quoting *Markman*, 52 F.3d at 980)
16 (internal quotation marks omitted). For a variety of reasons, extrinsic evidence is usually
17 “less reliable than the patent and its prosecution history” as a source for claim
18 interpretation. *Id.* at 1318. The court thus need not admit extrinsic evidence but may do
19 so at its discretion. *Id.* at 1319.

21 ³ The prosecution history exists independently of the patent. It consists of the inventor’s
22 application to the United States Patent and Trademark Office (“PTO”) and all correspondence
between the PTO and the inventor documenting the invention’s progress from patent application
to issued patent. *Vitronics*, 90 F.3d at 1582.

1 **B. Relationship of the Patents**

2 Before construing the disputed claim terms, the court addresses the relationship of
3 the Patents. All four Patents are related: the '718 Patent is a continuation of the '365
4 Patent; the '314 Patent is a continuation of both the '365 Patent and the '718 Patent; and
5 the '526 Patent is a continuation-in-part of the '365 Patent. (*See* '718 Patent at 1:6-12;
6 '314 Patent at 1:6-14; '526 Patent at 1:7-14.)

7 “By definition, a continuation adds no new matter and is akin to an amendment of
8 a pending application.” *Applied Materials, Inc. v. Advanced Semiconductor Materials*
9 *Am., Inc.*, 98 F.3d 1563, 1579 (Fed. Cir. 1996) (Mayer, J., concurring). As continuations
10 of the '365 Patent, the '718 Patent and '314 Patent must share the specification of the
11 '365 Patent. *See id.* At first glance, however, the '718 Patent and the '314 Patent appear
12 to add new matter to the shared specification: the specifications of both the '718 Patent
13 and the '314 Patent include a substantial component of the specification of an unrelated
14 patent, U.S. Patent No. 6,207,085, to Eva Ackerman (“the Ackerman Patent”). (*See* '718
15 Patent at 5:19-8:51; '314 Patent at 5:25-8:62; *see also* Trojan Decl. ¶ 8, Ex. 6
16 (“Ackerman Patent”) at 2:18-5:64.) The Ackerman Patent covers “heat expandable
17 compositions” that may serve as the “intumescent strip” claimed in the Patents. (*See*
18 '365 Patent at 5:7.)

19 Notwithstanding the presence in the specifications of the '718 Patent and the '314
20 Patent of matter that does not physically appear in the '365 Patent’s specification, the
21 court finds that the '718 Patent and the '314 Patent are indeed continuations of the '365
22 Patent. As explained below, the '365 Patent incorporates by reference the entirety of the

1 Ackerman Patent. *See infra* § III.B.1; (*see also* '365 Patent at 5:6-10.) Thus, the
2 patentee simply inserted into the '718 Patent and the '314 Patent's specifications a
3 section of the Ackerman Patent that was already incorporated by reference into the '365
4 Patent. The court thus treats the '718 Patent and the '314 Patent as what they claim to be:
5 continuations of the '365 Patent. (*See* '718 Patent at 1:6-12; '314 Patent at 1:6-14.)

6 As mentioned above, the first two disputed claim terms—"intumescent strip" and
7 "affixed lengthwise on at least one of the outer sidewall surfaces"—appear in all the
8 Patents. The court "presume[s], unless otherwise compelled, that the same claim term in
9 the same patent or related patents carries the same construed meaning." *Omega Eng'g,*
10 *Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003); *see also NTP, Inc. v.*
11 *Research In Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005), *abrogated on other*
12 *grounds by, Zoltek Corp. v. United States*, 672 F.3d 1309, 1323 (Fed. Cir. 2012)
13 ("Because [the plaintiff's] patents all derive from the same parent application and share
14 many common terms, we must interpret the claims consistently across all asserted
15 patents."). The parties construe the first two disputed claim terms consistently across the
16 Patents. (*See generally* Jt. Claim Constr. Stmt.; Pls. Op. Br.; Defs. Op. Br.) The court
17 does the same.

18 **C. Disputed Terms**

19 1. intumescent strip

20 The claim term "intumescent strip" appears in Claims 1, 8, 9, 10, and 11 of the
21 '365 Patent; Claims 1, 8, 9, 10, 11, 12, 14, and 15 of the '718 Patent; Claims 1, 6, 8, and
22 9 of the '314 Patent; and Claims 1, 2, 7, 8, 9, and 10 of the '526 Patent. ('365 Patent at

6:57, 8:11, 8:14, 8:19, 8:22; '718 Patent at 10:25, 11:8, 11:16, 11:18-19, 12:8, 12:17,
12:21; '314 Patent at 10:26, 10:51, 10:60, 10:64; '526 Patent at 7:41, 8:9, 8:28, 8:32-33,
8:35-36, 8:39.) Claim 1 of the '365 Patent is representative of the asserted claims with
respect to the term “intumescent strip.” It recites: “A fire retardant head-of-wall
assembly configured to seal a linear head-of-wall construction joint or gap when exposed
to a heat source, comprising: . . . an elongated intumescent strip affixed lengthwise on at
least one of the outer sidewall surfaces of the pair of sidewalls” ('365 Patent at
6:43-45, 57-59; *see also* '718 Patent at 10:10-12, 23-25; '314 Patent at 12:21-22, 26-28;
'526 Patent at 7:33-34, 41-43.)

The parties propose the following constructions of the claim term “intumescent
strip”:

Plaintiffs’ Proposed Construction: “a barrier comprising some material capable
of expanding when subjected to a heat source.” (Pls. Op. Br. at 11.)

Defendants’ Proposed Construction: “an expandable substance that is
distributed substantially uniformly throughout a solid resinous material, in a
rectilinear form, such that when exposed to heat swells.” (Defs. Op. Br. at 6.)

The court construes this claim term as “a strip that comprises a substance that
expands when exposed to heat.” This construction reflects the parties’ agreement that an
intumescent substance is a substance that expands, or swells, when exposed to heat. (*See*
Defs. Op. Br. at 6; Pls. Resp. at 2.) In addition, the construction makes clear that an
intumescent strip necessarily includes, but is not limited to, an intumescent substance.
See Exergen Corp. v. Wal-Mart Stores, Inc., 575 F.3d 1312, 1319 (Fed. Cir. 2009) (“The

1 . . . term ‘comprising,’ . . . is well understood in patent law to mean ‘including but not
2 limited to.’”).

3 To begin, the court declines to construe the word “strip.” The court is not to make
4 a construction that “contribute[s] nothing but meaningless verbiage to the definition of
5 the claimed invention.” *Harris Corp. v. IXYS Corp.*, 114 F.3d 1149, 1152 (Fed. Cir.
6 1997). Claim construction is required only “when the meaning or scope of technical
7 terms and words of art is unclear . . . and requires resolution in order to determine” the
8 issue. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997).

9 Accordingly, “[i]f the claim language is clear on its face, then [the court’s] consideration
10 of the rest of the intrinsic evidence is restricted to determining if a deviation from the
11 clear language of the claims is specified.” *Interactive Gift Express, Inc. v. Compuserp*
12 *Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001); *see also Hastings v. United States*, 78 Fed.
13 Cl. 729, 733 (Fed. Cl. 2007) (“[I]f a claim element is clear on its face, or at least if the
14 parties’ constructions would serve to obfuscate or warp its meaning, then the court may
15 decline to construe the element.”).

16 Here, a person of ordinary skill in the art would readily understand “strip” to carry
17 its plain and ordinary meaning in the context of the asserted claims. The intrinsic
18 evidence discloses no deviations from the plain and ordinary meaning of “strip.” *See*
19 *Interactive Gift*, 256 F.3d at 1331. Moreover, both parties’ proposed definitions of
20 “strip” are deficient. Plaintiffs define “strip” as “a barrier.” (Pls. Op. Br. at 12.) In so
21 doing, Plaintiffs emphasize that Claim 1 of the ’365 Patent and Claim 1 of the ’718
22 Patent disclose that the purpose of the inventive head-of-wall assembly is “to seal a linear

1 head-of-wall construction joint or gap when exposed to a heat source.” (*Id.* (arguing that
2 “to seal” is to “act[] as a barrier”); *see also* ’365 Patent at 6:43-45; ’718 Patent at
3 10:10-12.) As the Patents’ specifications make clear, however, the intumescent strip does
4 not swell—and thus does not become “a barrier”—until it is exposed to heat. (*Compare*
5 ’365 Patent at Fig. 3A (showing intumescent strip in resting state) *with* ’365 at Fig. 3B
6 (showing intumescent strip that has expanded in response to heat).) Plaintiffs’ definition
7 therefore confuses the strip’s form and function. On the other hand, Defendant’s
8 proposed definition of “strip”—as “a . . . rectilinear form”—fails to meaningfully clarify
9 the term. (*See* Defs. Op. Br. at 9.) That a “strip” is rectangular in form is apparent from
10 the term’s plain and ordinary meaning. Accordingly, the court rejects the parties’
11 proposed definitions of “strip” and finds that the term carries its plain and ordinary
12 meaning in the context of the asserted claims.

13 The parties agree that an intumescent strip may include non-intumescent
14 components in addition to an intumescent substance. (*See* Pls. Resp. at 2; Defs. Resp. at
15 5.) For instance, the ’314 Patent claims an intumescent strip with a specific composition:
16 expandable graphite, which acts as the intumescent agent; a fire retardant; and “an
17 inorganic filler dispersed in a emulsion of polyvinyl acetate or silicone.” (’314 Patent at
18 10:28-34.) Similarly, the Patents’ specifications all incorporate by reference the
19 Ackerman Patent, which covers “heat expandable compositions” that may serve as the
20 intumescent strip claimed in the Patents. (’365 Patent at 5:4-8; *see also* ’718 Patent at
21 5:6-10; ’314 Patent at 5:6-10; ’526 Patent at 5:40-46; *see also* Ackerman Patent.)
22 Specifically, the Ackerman Patent claims “[a] composition, which expands on exposure

1 to heat to form a heat insulating barrier, which comprises . . . expandable graphite; . . .
2 fire retardant; [and] . . . a resinous emulsion.” (Ackerman Patent at 6:54-60.)

3 The parties disagree, however, about whether the intumescent substance must be
4 “distributed substantially uniformly throughout a solid resinous material,” as Defendants
5 maintain. (See Defs. Op. Br. at 7-9.) In arguing for this construction, Defendants rely
6 primarily on the specification of the ’314 Patent.⁴ (See *id.* at 7.) Specifically, Defendants
7 emphasize that the ’314 Patent teaches that the intumescent strip “consists of a resinous
8 emulsion into which is *admixed* an expandable graphite and a fire retardant agent.” (*Id.*
9 (quoting ’314 Patent at 5:20-22) (emphasis in Defs. Op. Br.)) The ’314 Patent further
10 explains that the ingredients that comprise the intumescent strip are “thoroughly mixed
11 and blended, preferably in the mixing tank,” prior to being extruded into strips. (*Id.*
12 (quoting ’314 Patent at 8:44-45); *see also* ’718 Patent at 8:40-44.) In addition,
13 Defendants note that the Ackerman Patent’s heat-expandable compositions—
14 incorporated by reference into all the Patents—contain expandable graphite, fire
15 retardant, and an optional inorganic filler, “all of which is admixed with a resinous
16 emulsion.” (Defs. Op. Br. at 7-8; *see also* Ackerman Patent at 1:55-58.)

17 The court sees three problems with adopting a construction of “intumescent strip”
18 that requires the intumescent substance to be “distributed substantially uniformly
19 throughout a solid resinous material.” First, the words “substantially uniformly” never
20

21 ⁴ In their brief, Defendants emphasize the ’314 Patent’s specification. (See Defs. Op. Br.
22 at 7.) As discussed above, however, *see supra* § III.B., the ’314 Patent and the ’718 Patent share
an essentially identical specification. (See *generally* ’314 Patent; ’718 Patent.)

1 appear in any of the Patents. (*See generally* '365 Patent; '718 Patent; '314 Patent; '526
2 Patent.) Defendants appear to argue that admixing a substance into a resinous emulsion
3 will, as a rule, evenly distribute that substance throughout the emulsion. (Defs. Op. Br. at
4 7-9.) That assumption is untethered to the language of the Patents, and the court declines
5 to import it into the claim term.

6 In addition, the mixing process set forth in the '718 Patent and the '314 Patent's
7 specification describes a preferred method of manufacturing the intumescent strip, not the
8 intumescent strip itself.⁵ (*See* '718 Patent at 6:40-45; '314 Patent at 8:31-48.)
9 Defendants effectively acknowledge as much, cautioning the court against overlooking
10 the Patents' descriptions "of how the strip is made." (Defs. Op. Br. at 9.) Yet, the
11 Patents claim a product that features an intumescent strip, rather than a specific means of
12 manufacturing an intumescent strip. Defendants' proposed construction elides that
13 distinction. In so doing, Defendants contravene the rule that "[a] novel product that
14 meets the criteria of patentability is not limited to the process by which it was made."
15 *Vanguard Prods. Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370, 1372-73 (Fed. Cir.
16 2000) (emphasizing that "[t]he method of manufacture, even when cited as advantageous,
17 does not of itself convert product claims into claims limited to a particular process").

18 Finally, to the extent Defendants rely on the incorporated Ackerman Patent to
19 argue that the intumescent substance must be "distributed substantially uniformly
20

21 ⁵ The court notes that the mixing process described in the '718 Patent and the '314 Patent
22 is taken from the Ackerman Patent. (*See* '718 Patent at 8:40-45; '314 Patent at 8:44-48; *see also*
Ackerman Patent at 5:44-47.)

1 throughout a solid resinous material,” Defendants erroneously read into the claims
2 limitations from preferred embodiments. *See Phillips*, 415 F.3d at 1320 (explaining that
3 the court must not read a limitation from the patent’s written description into the claims).
4 According to each Patent’s specification, the Ackerman Patents’ heat-expandable
5 compositions are “[e]xemplary” of the commercially available intumescent strips that
6 may be used in the head-of-wall assemblies claimed by the Patents. (’365 Patent at 5:4;
7 ’718 Patent at 5:6; ’314 Patent at 5:6; ’526 Patent at 5:40.) In other words, the Ackerman
8 Patent provides but one example of the intumescent strips that may be used to practice
9 the inventive head-of-wall assemblies. (*See id.*) As a result, the court cannot read
10 limitations drawn from the Ackerman Patent’s claim language and specification into the
11 claim term “intumescent strip.” The court thus declines to adopt the limitation
12 “distributed substantially uniformly throughout a solid resinous material.”⁶

13 In addition, the parties disagree about whether an “intumescent strip” may
14 encompass non-intumescent materials, such as a separate backing or substrate, on which
15 the composition containing the intumescent substance lies. (*See Pls. Op. Br.* at 14-15;
16 *Defs. Resp.* at 5-8.) The flashpoint of this debate is, again, the incorporated Ackerman
17 Patent. (*See Defs. Resp.* at 6-7.) As explained above, the Ackerman Patent claims
18 intumescent compositions that may be mixed together and “extruded into thin strips.”

19
20 ⁶ Furthermore, Defendants’ assumption that the intumescent strip must include a resinous
21 emulsion is erroneous. Claim 2 of the ’526 Patent claims the head-of-wall assembly of Claim 1
22 of the ’526 Patent “wherein the elongated intumescent strip comprises expandable graphite and a
fire retardant.” (’526 Patent at 8:8-10.) This language suggests that the intumescent strip may,
but need not, include a resinous emulsion.

1 (Ackerman Patent at 5:47.) The Ackerman Patent notes that an intumescent strip “may
2 be entirely composed of the extruded material” containing the intumescent composition.
3 (*Id.* at 5:48-49.) However, the Ackerman Patent also describes a preferred embodiment
4 in which the “mixture” containing the intumescent substance “may be extruded onto thin
5 flexible strips composed of wax paper, mineral wool, artificial fiber ribbons such as
6 tetrahydrofuran fibers and aromatic amide fibers, polyethylene film, polypropylene film,
7 polyurethane film or polyester film.” (*Id.* at 5:49-54.)

8 Plaintiffs argue that the Patents incorporate the Ackerman Patent’s entire
9 specification, including its preferred embodiments. (*See* Pls. Op. Br. at 13-14.)
10 According to Plaintiffs, the Patents thus “define[] ‘intumescent strip’ as capable of, in
11 some embodiments, comprising not only an intumescent material . . . but also a
12 non-intumescent ‘flexible substrate.’” (*Id.* at 14.) Defendants, on the other hand, insist
13 that the Patents incorporate only the Ackerman Patent’s heat-expandable
14 “compositions”—*i.e.*, a composition including expandable graphite, fire retardant, and an
15 optional inorganic filler—but not the embodiments in the Ackerman Patent that feature a
16 non-intumescent substrate. (Defs. Resp. at 6-7 (arguing that “Plaintiffs run afoul of the
17 rule that incorporating material by reference into a patent does not transform the claimed
18 invention to that of the invention disclosed in the incorporated material”).)

19 To resolve this debate, the court examines the extent of the Patents’ incorporation
20 of the Ackerman Patent’s specification. Incorporation by reference provides “a method
21 for integrating material from various documents into a host document[] . . . by citing
22 such material in a manner that makes clear that the material is effectively part of the host

document as if it were explicitly contained therein.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). When determining the extent of incorporation by reference, the court asks whether a reasonable person of ordinary skill in the art would understand the host document to describe with “sufficient particularity” the material to be incorporated. *Husky Injection Molding Sys. Ltd. v. Athena Automation Ltd.*, 838 F.3d 1236, 1248 (Fed. Cir. 2016) (citing *Harari v. Lee*, 656 F.3d 1331, 1334 (Fed. Cir. 2011)).

A reasonable person of ordinary skill in the art would understand the Patents to incorporate the Ackerman Patent’s preferred embodiments. All four Patents reference the Ackerman Patent as follows:

The intumescent strip is commercially available (e.g., 3M Company or The Rectorseal Corporation, U.S.A.) and preferably has an adhesive backing that allows it to be readily affixed onto the outer sidewall surface. Exemplary in this regard are the heat expandable compositions disclosed in U.S. Pat. No. 6,207,085 to Ackerman (incorporated herein by reference), which discloses a composition that, when subjected to heat, expands to form a heat-insulating barrier.

(’365 Patent at 5:1-8; *see also* ’718 Patent at 5:3-11; ’314 Patent at 5:3-10; ’526 Patent at 5:37-45.) To begin, although the Patents emphasize the Ackerman Patent’s heat-expandable compositions, the Patents do not purport to incorporate only those portions of the Ackerman Patent that discuss the compositions; rather, the incorporating language refers to the Ackerman Patent as a whole. *Cf. Zenon Envtl., Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1379 (Fed. Cir. 2007) (where the incorporating language stated that “[f]urther details relating to the construction and deployment of a most preferred skein are found in the parent U.S. Pat. No. 5,639,373, . . . the *relevant disclosures* of . . .

1 which are included by reference,” only details relating to the construction and
2 deployment of a most preferred skein were incorporated by reference) (emphasis added).
3 Moreover, the Patents incorporate the Ackerman Patent to specify an “exemplary”
4 version of the “commercially available” intumescent strips that may be used to practice
5 the inventive head-of-wall assemblies. (*See* ’365 Patent at 5:1-8.) The “commercially
6 available” intumescent strips covered by the Ackerman Patent presumably encompass its
7 preferred embodiments, including those in which the mixture containing the intumescent
8 substance is extruded onto a physically distinct substrate. (*See* Ackerman Patent at
9 5:48-54.) Finally, the specifications of both the ’718 Patent and the ’314 Patent—
10 continuations of the ’365 Patent—recite, verbatim, nearly the entirety of the Ackerman
11 Patent’s “detailed description of preferred embodiments,” including the disclosures
12 concerning the flexible substrate. (*See* ’718 Patent at 5:19-8:51; ’314 Patent at 5:25-8:62;
13 *see also* Ackerman Patent at 2:18-5:64.) The ’718 Patent and the ’314 Patent thus do
14 explicitly what the ’365 Patent did by incorporation by reference: they sweep into the
15 Patents not only the specific compositions of the intumescent strips the Ackerman Patent
16 claims, but also the Ackerman Patent’s preferred embodiments. (*See id.*)

17 For these reasons, Defendants’ construction of “intumescent strip” is too narrow.
18 An interpretation of a claim term that excludes a preferred embodiment is “rarely, if ever,
19 correct.” *Vitronics*, 90 F.3d at 1583. But Defendants’ construction does just that. First,
20 Defendants’ construction excludes the Ackerman Patent’s, and, by extension, the
21 Patents’, preferred embodiments: by limiting the intumescent strip to “an expandable
22 substance” in a “solid resinous material,” Defendants’ construction does not encompass

1 intumescent strips in which the composition that contains the intumescent substance lies
2 upon a non-intumescent substrate like wax paper or mineral wool. (*See* Def. Op. Br. at 6;
3 *see also* '718 Patent at 8:44-49; '314 Patent at 8:48-53.) Furthermore, Defendants'
4 construction appears not to embrace a preferred embodiment, expressly described in all
5 the Patents, in which the intumescent strip "has an adhesive backing that allows it to be
6 readily affixed onto the outer sidewall surface." (*See* '365 Patent at 5:3-4; '718 Patent at
7 5:5-6; '314 Patent at 5:5-6; '526 Patent at 5:39-40.) Defendants' construction is thus
8 fatally under-inclusive.

9 The foregoing analysis leads the court to conclude that an "intumescent strip" is a
10 "strip that comprises a substance that expands when exposed to heat." This construction
11 makes clear that the intumescent strip need not include only an intumescent substance. It
12 is also broad enough to encompass preferred embodiments in which the strip consists of a
13 composition containing an intumescent substance, where that composition lies atop a
14 non-intumescent substrate.

15 2. affixed lengthwise on at least one of the outer sidewall surfaces

16 The claim term "affixed lengthwise on at least one of the outer sidewall surfaces"
17 appears in Claim 1 of the '365 Patent; Claims 1 and 12 of the '718 Patent; Claims 1 and 6
18 of the '314 Patent; and Claim 1 of the '526 Patent. ('365 Patent at 6:57-59; '718 Patent
19 at 10:23-25, 12:8-10; '314 Patent at 10:26-28, 10:52-54; '526 Patent at 7:41-43.) The
20 claim term refers to the positioning of the intumescent strip on the outer sidewall of the
21 header track.

22 //

1 The parties propose the following constructions of the claim term “affixed
2 lengthwise on at least one of the outer sidewall surfaces”:

3 **Plaintiffs’ Proposed Construction:** “to be attached to, with or without direct
4 physical contact between the intumescent strip and the outer sidewall surfaces of
5 the header track.” (Pls. Op. Br. at 16.)

6 **Defendants’ Proposed Construction:** “securely fastened in a longitudinal
7 direction and immediately adjacent to the outwardly facing surface of a sidewall.”
8 (Defs. Op. Br. at 10.)

9 The court construes this claim term as “attached lengthwise, directly or by means
10 of an intervening adhesive, to at least one of the outer sidewall surfaces.”

11 As a threshold matter, the court finds that the claim elements “lengthwise” and “at
12 least one of the outer sidewall surfaces” do not require special construction. Plaintiffs
13 correctly contend that these elements are clear on their face and would be readily
14 understood by a person of ordinary skill in the art. (*See* Jt. Cl. Constr. Stmt. at 3; Pls. Op.
15 Br. at 12). Indeed, Defendants’ proposed constructions of “lengthwise” (as “in a
16 longitudinal direction”) and “outer sidewall surface[.]” (as “the outwardly facing surface
17 of a sidewall”) merely contribute unnecessary verbiage to the construction of the claim
18 term. *See Harris Corp.*, 114 F.3d at 1152.

19 Accordingly, the interpretation of the claim term centers on the limitation “affixed
20 . . . on.” The court begins with the claim language itself. The claim language makes
21 clear that the limitation “affixed . . . on” does not preclude the presence of an intervening
22 element between the inward-facing surface of the intumescent strip and the outer surface

1 of the sidewall. Most notably, the '365 Patent includes a dependent claim that discloses
2 “a fire retardant epoxy adhesive interposed between the intumescent strip and the at least
3 one of the outer sidewall surfaces of the pair of sidewalls.” ('365 Patent at 8:20-23
4 (dependent Claim 11).) The '718 Patent and the '526 Patent similarly include dependent
5 claims that disclose an adhesive between the intumescent strip and the outer sidewall
6 surface. ('718 Patent at 11:18-21 (dependent Claim 11, which claims “[t]he fire retardant
7 head-of-wall assembly of claim 1, further comprising an adhesive interposed between the
8 intumescent strip and the at least one of the outer sidewall surfaces of the pair of
9 sidewalls”); '526 Patent at 8:33-36 (dependent Claim 9, which claims “[t]he fire retardant
10 head-of-wall assembly of claim 2, further comprising an adhesive interposed between the
11 intumescent strip and the at least one of the outer sidewall surfaces of the pair of
12 sidewalls”).) To construe “affixed . . . on” to require that the intumescent strip be
13 immediately next to the sidewall surface would impermissibly read out these dependent
14 claims. *See Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1445 (Fed. Cir.
15 1997) (“[W]e must not interpret an independent claim in a way that is inconsistent with a
16 claim which depends from it[.]”).

17 Additionally, the Patents' specifications suggest that the limitation “affixed . . .
18 on” does not require that the inward-facing surface of the intumescent strip be in contact
19 with, or immediately next to, the outer surface of the sidewall. For example, the '365
20 Patent, the '718 Patent, and the '314 Patent disclose that “a commercially available . . .
21 fire-retardant epoxy adhesive may preferably also be used” to “ensure that the
22 intumescent strip stays in place when exposed to heat.” ('365 Patent at 5:11-15; '718

1 Patent at 5:14-18; '314 Patent at 5:13-17.) Likewise, the '526 Patent discloses a
2 preferred embodiment in which “a fire-retardant adhesive . . . may be interposed between
3 the intumescent strip and the outer sidewall surfaces of the pair of sidewalls.” ('526
4 Patent at 5:62-64.) In short, the court must construe “affixed . . . on” to allow for the
5 existence of a separate, adhesive element—physically distinct from the intumescent
6 strip—between the inner surface of the intumescent strip and the outer surface of the
7 sidewall.

8 Defendants argue, however, that the Patents also contain disclosures that suggest
9 any material between the intumescent strip and the sidewall surface may be only of
10 minimal thickness. (*See* Defs. Op. Br. at 11.) Claim 1 of the '365 Patent and Claim 1 of
11 the '718 Patent share a claim limitation related to the thickness of the intumescent strip.
12 Specifically, the limitation recites that “the intumescent strip ha[s] an outer strip surface
13 offset from the outer sidewall surface an intumescent strip offset distance.” ('365 Patent
14 at 6:60-62; '718 Patent at 10:26-29.) In other words, in the head-of-wall assembly
15 covered by Claim 1 of the '365 Patent and the '718 Patent, the intumescent strip is offset
16 from the outer sidewall surface a distance equal to the width of the strip itself. (*See id.*)
17 Similarly, the specification shared by the '365 Patent, '718 Patent, and '314 Patent
18 discloses that “[t]he intumescent strip has an outer planar strip surface offset from the
19 outer sidewall surface an intumescent strip offset distance generally equal to its thickness
20 (which is preferably about 1/8 inch).” ('365 Patent at 4:53-57; '718 Patent at 4:55-59;
21 '314 Patent at 4:55-59.) Defendants contend that, in light of the above claim language
22 and shared specification, “there can be no room for anything between the wallboard and

1 the outer sidewall surface except an intumescent strip” and, optionally, a negligible layer
2 of adhesive. (Defs. Op. Br. at 11.) Accordingly, Defendants argue, the intumescent strip
3 must be “immediately adjacent” to the sidewall surface. (*Id.*)

4 The court finds that the intrinsic evidence does not demonstrate a clear intention to
5 limit the claim scope in the manner Defendants propose. First, the claim language
6 regarding the “intumescent strip offset distance” appears only in Claim 1 of the ’365
7 Patent and Claim 1 of the ’718 Patent. (*See* ’365 Patent at 6:60-62; ’718 Patent at
8 10:26-29.) It does not appear in any of the claims of the ’314 Patent, a continuation of
9 the ’365 Patent, or of the ’526 Patent. (*See generally* ’314 Patent at 10:20-65; ’526
10 Patent at 7:32-8:46.) If a patentee broadens claims in a continuation patent by omitting
11 claim limitations from the parent patent, courts should not reinsert those limitations into
12 the continuation patent’s claims. *See Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d
13 1352, 1353-58 (Fed. Cir. 2004) (holding that the progression of claim language showed
14 that the patentee “purposefully sought” a claim broader in scope than its earlier one and,
15 “[a]bsent a clear disavowal or contrary definition in the specification or the prosecution
16 history, the patentee is entitled to the full scope of its claim language”); *see also*
17 *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1254 (Fed. Cir. 2011)
18 (explaining that “importing a . . . limitation improperly discounts substantive differences
19 between the claims”) (citation and internal quotation marks omitted)); *Enzo Biochem,*
20 *Inc. v. Applera Corp.*, 599 F.3d 1325, 1333 (Fed. Cir. 2010) (holding that the district
21 court erred by construing a disputed claim term to include a limitation that appeared in
22 earlier generations of the patent but not the continuation patent). Here, the patentee knew

1 how to claim the limitation regarding “intumescent strip offset distance,” as he did in the
2 ’365 and ’718 Patents, but specifically omitted that claim language in the ’314 Patent and
3 the ’526 Patent. (*See* ’365 Patent at 6:60-62; ’718 Patent at 10:26-29; *see generally* ’314
4 Patent at 10:20-65; ’526 Patent at 7:32-8:46.) The court thus rejects Defendants’
5 contention that the limitation regarding “intumescent strip offset distance” flows through
6 all the Patents and declines to import this limitation into the court’s construction of
7 “affixed . . . on.”

8 Relatedly, Defendants’ reliance on the “precise measurements” of the strip’s
9 thickness, as set forth the shared specification of the ’365 Patent, the ’718 Patent, and the
10 ’314 Patent, is misplaced. (Defs. Op. Br. at 11; *see also* ’365 Patent at 4:53-57; ’718
11 Patent at 4:55-59; ’314 Patent at 4:55-59.) Defendants correctly note the specification
12 suggests that the distance between the outward surface of the intumescent strip and the
13 sidewall is “generally” equal to the thickness of the intumescent strip—a disclosure that
14 suggests any adhesive between the sidewall and the intumescent strip must be of only
15 negligible thickness. (*See* ’365 Patent at 4:53-57; ’718 Patent at 4:55-59; ’314 Patent at
16 4:55-59.) However, in using this disclosure to argue that, as a rule, any intervening
17 adhesive must be “thin enough so as not to affect the overall positions of the invention’s
18 components,” Defendants effectively read the qualifier “generally” out of the
19 specification. (*See* Defs. Resp. at 12.) To say that the intumescent strip is “generally”
20 offset from the sidewall a distance equal to its thickness does not mean that the
21 intumescent strip is always offset from the sidewall a distance equal to its thickness.

22 //

1 Defendants' construction fails to recognize this distinction. In so doing, Defendants
2 impermissibly import into the claim language limitations drawn from an embodiment.

3 Defendants' construction of "affixed . . . on" to mean "securely fastened . . . and
4 immediately adjacent to" suffers other deficiencies. The court is not persuaded that
5 Defendants' construction can be reconciled with the plain language of the dependent
6 claims and preferred embodiments that contemplate the interposition of a separate,
7 adhesive element between the intumescent strip and the outer sidewall surface. This
8 reconciliation is only possible if the court assumes, as Defendants do, that "immediately
9 adjacent" means "right next to" but not necessarily in physical contact with—a contorted
10 interpretation that is neither logically sound nor consistent with the phrase's plain and
11 ordinary meaning. (*See* Defs. Resp. at 12.) Moreover, in the context of other aspects of
12 the Invention, the Patents' claims employ language that expressly connotes direct contact.
13 For example, the '365 Patent and the '718 Patent claim a "wallboard having an elongated
14 upper interior wallboard surface in linear contact with and bearing against the outer strip
15 surface of the elongated intumescent strip." ('365 Patent at 7:10-12; '718 Patent at
16 10:43-46.) Similarly, the '526 Patent claims a "wallboard having an elongated upper
17 interior wallboard surface in contact with the outer strip surface of the elongated
18 intumescent strip." ('526 Patent at 8:5-7.) As Plaintiffs point out, these claim limitations
19 "demonstrate[] that the patentee knew to use the language 'in contact with' to expressly
20 denote direct contact," but chose not to when describing the positioning of the
21 intumescent strip. (Pls. Op. Br. at 17.)

22 //

1 If Defendants’ construction is too narrow to accommodate dependent claims and
2 preferred embodiments, Plaintiffs’ construction unduly broadens the claim language. In
3 brief, Plaintiffs ask the court to construe “affixed . . . on” to expressly provide that there
4 need not be “direct physical contact” between the surface of the intumescent strip and the
5 surface of the sidewall. (*Id.* at 16-17.) The Patents’ disclosures do not support so broad a
6 reading. As explained above, the ’365 Patent, the ’718 Patent, and the ’526 Patent all
7 include dependent claims that claim an adhesive element “interposed” between the
8 intumescent strip and the outer sidewall surface. (’365 Patent at 8:20-23 (fire-retardant
9 epoxy adhesive); ’718 Patent at 11:18-20 (adhesive); ’526 Patent at 8:33-36 (adhesive).)
10 Moreover, in the preferred embodiments in the Patents’ specifications, a separate
11 adhesive lies between the intumescent strip and the outer sidewall surface. (’365 Patent
12 at 5:11-15; ’718 Patent at 5:14-18; ’314 Patent at 5:13-17; ’526 Patent at 5:62-64.)
13 Plaintiffs appear to assume that, if the intumescent strip is stuck to the sidewall by means
14 of an adhesive, the intumescent strip may, in some instances, not be physically connected
15 with the surface of the sidewall. In none of the Patents’ dependent claims or
16 embodiments, however, does the Patents’ language make clear that there may be no
17 contact whatsoever between the intumescent strip and the sidewall. The court thus
18 declines to import the limitation “with or without direct physical contact into the claim
19 term “affixed. . . on.”

20 Instead, the court construes “affixed lengthwise on at least one of the outer
21 sidewall surfaces” to mean “attached lengthwise, directly or by means of an intervening
22 adhesive, to at least one of the outer sidewall surfaces.” This construction is consistent

1 with the dependent claims in the '365 Patent, the '718 Patent, and the '526 Patent in
2 which an adhesive element is “interposed” between the intumescent strip and the outer
3 sidewall surface. (*See* '365 Patent at 8:20-23; '718 Patent at 11:18-21; '526 Patent at
4 8:33-36.) The court’s construction is also consistent with preferred embodiments in the
5 specification shared by the '365 Patent, the '718 Patent, and the '314 Patent, as well as
6 the specification of the '526 Patent, in which an epoxy adhesive lies between the
7 intumescent strip and the surface of the sidewall.⁷ (*See* '365 Patent at 5:11-15; '718
8 Patent at 5:14-18; '314 Patent at 5:13-17; '526 Patent at 5:62-64.)

9 3. inorganic filler

10 This term appears in Claim 1 of the '314 Patent. ('314 Patent at 10:32.) Unlike
11 the other Patents, the '314 Patent claims a particular composition for the intumescent
12 strip. Specifically, Claim 1 claims an “intumescent strip having a composition that
13 comprises: (A) from 5 to 95% by weight of expandable graphite; (B) from 1 to 70% by
14 weight of a fire retardant; (C) from 1 to about 50% by weight of an inorganic filler
15 dispersed in a emulsion of polyvinyl acetate or silicone.” (*Id.* 10:26-34.)

16 The parties propose the following constructions of the claim term “inorganic
17 filler”:

18 **Plaintiffs’ Proposed Construction:** “any inorganic material in the intumescent
19 strip, including but not limited to those materials set forth in the '314 Patent, col.

21 ⁷ In their briefing, the parties argue that the Federal Circuit’s decision in *AFG Industries,*
22 *Inc. v. Cardinal IG Company, Inc.*, 239 F.3d 1239 (Fed. Cir. 2001), supports their respective
constructions of “affixed . . . on.” (Pls. Op. Br. at 19-20; Defs. Resp. at 12-13.) The court need
not reach these arguments.

1 7, lines 47-56.” (Pls. Op. Br. at 21.)

2 **Defendants’ Proposed Construction:** “a non-carbonaceous material.” (Def.
3 Op. Br. at 15.)

4 The court construes this term as “an inorganic filler, including but not limited to
5 perlite, vermiculite, expandable glasses, micas, clay, talc, borosilicates, cokes, charcoals,
6 hard coals, brown coals, calcium carbonate, cereal grains, cork, bark granules,
7 expandable clay, foamed concrete, metal sponge, pumice, tuff, and/or lava.” This
8 construction echoes Plaintiffs’ proposed construction, but expressly identifies the
9 materials set forth in the relevant portion of the ’314 Patent’s specification as constituting
10 “inorganic fillers” that may be used to practice the invention. (See ’314 Patent at
11 7:43-53.)

12 In the ’314 Patent, the “Detailed Description of the Invention” explains that the
13 intumescent strip may comprise expandable graphite in addition to “expandable inorganic
14 filler[s].” (*Id.* at 7:43-47.) In particular, the specification provides:

15 The expandable graphite can also be used in admixture with other expandable
16 or nonexpandable additives. For instance expandable inorganic filler [sic]
17 have been found to render particularly advantageous results when used in
18 conjunction with expandable graphite. Such inorganic fillers include perlite,
19 vermiculite, expandable glasses, micas, clay, talc, borosilicates, cokes,
20 charcoals, hard coals, brown coals, calcium carbonate, cereal grains, cork,
21 bark granules, expandable clay, foamed concrete, metal sponge, pumice, tuff
22 and/or lava.

(’314 Patent at 7:43-53.)⁸

21 ⁸ The court observes that this disclosure is also found in the Ackerman Patent, the
22 specification of which is largely present in the ’314 Patent’s specification. (See Ackerman
Patent at 4:41-51.)

1 The parties primarily dispute whether the claim term “inorganic filler” should be
2 defined to include the list of materials set forth in the ’314 Patent’s specification.
3 Defendants acknowledge that the identified materials are “highly indicative” of the
4 meaning of “inorganic filler.” (Defs. Op. Br. at 15.) Defendants argue, however, that
5 some of the identified materials—including charcoals, wood, cereal grains, cork, and
6 bark—are “plainly organic” and fall outside the plain meaning of the claim term
7 “inorganic.” (*Id.*) Defendants propose that the court define “inorganic” as
8 “non-carbonaceous” so as to functionally remove organic materials from the list of
9 inorganic matter identified in the ’314 Patent’s specification. (*Id.* at 15.) By contrast,
10 Plaintiffs argue that Defendants’ construction of “inorganic filler” both fails to clarify the
11 claim term and ignores the embodiments disclosed in the ’314 Patent. (Pls. Resp. at
12 12-13.) Additionally, at the *Markman* hearing, Plaintiffs argued that the patentee defined
13 “inorganic” to include both the inorganic and organic materials set forth in the ’314
14 Patent’s specification and, thus, the patentee’s lexicography must govern the claim
15 construction analysis.

16 The specification may define a claim term in a manner that conflicts with the
17 meaning the term would otherwise possess. *Phillips*, 415 F.3d at 1316. In such cases,
18 the patentee’s lexicography controls. *Id.*; *see also 3M Innovative Props. Co. v. Avery*
19 *Dennison Corp.*, 350 F.3d 1365, 1374 (Fed. Cir. 2003) (“Because 3M expressly acted as
20 its own lexicographer by providing a definition of embossed in the specification, the
21 definition in the specification controls the meaning of embossed, regardless of any
22 potential conflict with the term’s ordinary meaning as reflected in technical

1 dictionaries.”); *Vitronics*, 90 F.3d at 1582 (“The specification acts as a dictionary when it
2 expressly defines terms used in the claims or when it defines terms by implication.”). For
3 the patentee to act a lexicographer, the patentee “must clearly express that intent in the
4 written description,” and “the statement in the specification must have sufficient clarity to
5 put one reasonably skilled in the art on notice that the inventor intended to redefine the
6 claim term.” *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1370 (Fed.
7 Cir. 2005); *see also Abbot Labs. v. Syntron Bioresearch, Inc.*, 334 F.3d 1343, 1354 (Fed.
8 Cir. 2015) (explaining that “[t]he patentee’s lexicography must . . . appear ‘with
9 reasonable clarity, deliberateness, and precision’ before it can affect the claim”) (quoting
10 *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (alteration in *Abbot Labs*) (emphasis
11 omitted). An inventor need not provide an express statement of redefinition, however;
12 “the specification may define claim terms by implication such that the meaning may be
13 found in or ascertained by a reading of the patent documents.” *Bell Atl. Network Servs.,*
14 *Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (internal
15 quotation marks and citation omitted); *see also Astrazeneca AB, Aktiebolaget Hassle,*
16 *KBI-E, Inc. v. Mut. Pharm. Co., Inc.*, 384 F.3d 1333, 1339 (Fed. Cir. 2004) (“Astrazeneca
17 seems to suggest that lexicography requires a statement in the form ‘I define _____ to
18 mean _____,’ but such rigid formalism is not required.”).

19 Here, the plain and ordinary meaning of the claim term “inorganic” conflicts with
20 the portion of the specification that identifies select organic materials as “inorganic

21 //

22 //

1 fillers.”⁹ (*See* ’314 Patent at 7:47-53.) The court finds, however, that a person of
2 ordinary skill in the art would readily understand “inorganic filler,” as that term is used in
3 the ’314 Patent, to include both inorganic materials and the organic materials listed in the
4 Patent’s specification, at column 7, lines 47 through 53. (*See id.*) The specification
5 explains that an intumescent strip that includes both expandable graphite and an
6 “inorganic filler” renders “particularly advantageous results.” (*Id.* at 7:44-47.) The
7 specification then unequivocally provides that “[s]uch inorganic fillers include” certain
8 specific materials. (*Id.* at 7:47.) The court cannot disregard the patentee’s intent to
9 define “inorganic filler” to “include” the specified materials (*see id.*), even if some of
10 those materials appear to fall outside of the ordinary meaning of “inorganic,” *see*
11 *Honeywell Int’l, Inc. v. Universal Avionics Sys. Corp.*, 493 F.3d 1358, 1361 (Fed. Cir.
12 2007) (“When a patentee defines a claim term, the patentee’s definition governs, even if
13 it is contrary to the conventional meaning of the term.”).

14 The court also observes that the list of “inorganic fillers” set forth in the ’314
15 Patent’s specification is non-inclusive: the specification provides that “[s]uch inorganic
16 fillers include” the specified materials, implying that other inorganic fillers may suffice.
17 (’314 Patent at 7:47 (emphasis added).) The court thus construes “inorganic filler” as
18

19 ⁹ Defendants contend that “charcoals,” “wood,” “cereal grains,” “cork,” and “bark”—
20 materials identified in the specification as “inorganic fillers”—are organic materials. (Defs. Op.
21 Br. at 15; *see also* ’314 Patent at 7:47-53.) Defendants do not thoroughly explain why a person
22 of ordinary skill in the art would find those materials to be organic, relying instead on the
apparent obviousness of that proposition. For purposes of this claim construction order, the court
takes Defendants’ argument at face value and assumes that charcoals, wood, cereal grains, cork,
and bark are indeed organic materials.

1 potentially encompassing inorganic materials not listed in the '314 Patent's specification,
2 at column 7, lines 47 through 53, in addition to the identified inorganic and organic
3 materials.¹⁰

4 4. dispersed in a emulsion of polyvinyl acetate or silicone

5 This claim term appears in Claim 1 of the '314 Patent. ('314 Patent at 10:32-34.)

6 As explained above, Claim 1 claims an intumescent with a specific composition,
7 including "an inorganic filler dispersed in a emulsion in polyvinyl acetate or silicone."
8 (*Id.*)

9 The parties offer the following constructions of the claim term "dispersed in a
10 emulsion of polyvinyl acetate or silicone":

11 **Plaintiffs' Proposed Construction:** "mixed with or in polyvinyl acetate
12 emulsion or silicone emulsion." (Pls. Op. Br. at 23.)

13 **Defendants' Proposed Construction:** "evenly distributed in an emulsification of
14 polyvinyl acetate or silicone." (Defs. Op. Br. at 16.)

15 The court declines to construe this claim term. No party argues that the '314
16 Patent imparts specialized meanings to the terms "emulsion," "polyvinyl acetate," or

17
18 ¹⁰ At the *Markman* hearing, Defendants' counsel argued that the inventor did not act as
19 his own lexicographer in the '314 Patent. Specifically, counsel argued that a patent claim may
20 be narrower than the disclosures in the specification, and that the inorganic fillers referenced in
21 the '314 Patent's specification fall outside the scope of the claimed invention. The court
22 disagrees. Even if the court were to find that the inventor did not act as his own lexicographer,
such that the court should define "inorganic" by its ordinary meaning, construing "inorganic
filler" to exclude the apparently organic materials listed in the '314 Patent's specification would
functionally exclude preferred embodiments. This, in turn, would contravene the general rule
that an interpretation of a claim term that excludes a preferred embodiment is "rarely, if ever,
correct." See *Vitronics*, 90 F.3d at 1583.

1 “silicone.” (*See generally* Pls. Op. Br.; Defs. Op. Br.) In addition, a person of ordinary
2 skill in the art would find that the term “dispersed in” carries its plain and ordinary
3 meaning in the context of the asserted claim. *See Ethicon*, 103 F.3d at 1568 (requiring
4 construction only where the “meaning or scope of technical terms and words of art is
5 unclear”).

6 Indeed, neither party’s proposed construction of “dispersed in” meaningfully
7 clarifies the claim term. Plaintiffs merely replace “dispersed in” with synonymous
8 language not drawn from the ’314 Patent’s specification. (*See* Pls. Op. Br. at 16.)
9 Indeed, at the *Markman* hearing, Plaintiffs’ counsel conceded that the court should
10 decline to construe the claim term “dispersed in” because the term “has its ordinary
11 meaning” in context of the ’314 Patent.

12 Defendants, for their part, argue that the phrase “evenly distributed” accurately
13 “characterizes the result” of the mixing process described in the specification. (Defs. Op.
14 Br. at 17.) As Defendants emphasize, the specification explains that, in a preferred
15 embodiment, the ingredients comprising the intumescent strip—expandable graphite, a
16 resinous emulsion, fire retardant, a surfactant, and filler materials—are “thoroughly
17 mixed and blended, preferably in the mixing tank,” prior to being extruded into strips.
18 (*See* ’314 Patent at 8:35-46; *see also* Defs. Op. Br. at 16.) Yet, the specification does not
19 indicate that the mixing process Defendants emphasize will, always and necessarily,
20 evenly distribute the inorganic filler throughout the polyvinyl acetate emulsion or the
21 silicone emulsion. The court thus declines to extrapolate “evenly distributed” from the
22 “mix[ing] and blend[ing]” process described the specification. (*See* ’314 Patent at

1 8:35-46.) In other words, the court rejects Defendants’ construction of “dispersed in” for
2 the same reason it rejected Defendants’ proposal to construe “intumescent strip” to
3 require that the intumescent substance be “distributed substantially uniformly”
4 throughout a resin: like the phrase “substantially uniformly,” the term “evenly
5 distributed” never appears in the ’314 Patent and is not supported by the claim language
6 and specification. (*See generally* ’314 Patent); *see supra* § III.C.1.

7 **IV. CONCLUSION**

8 For the foregoing reasons, the court rules as follows:

9 (1) The court CONSTRUES “intumescent strip” to mean “a strip that comprises a
10 substance that expands when exposed to heat”;

11 (2) The court CONSTRUES “affixed lengthwise on at least one of the outer
12 sidewall surfaces” to mean “attached lengthwise, directly or by means of an
13 intervening adhesive, to at least one of the outer sidewall surfaces”;

14 (3) The court CONSTRUES “inorganic filler” to mean “inorganic filler, including
15 but not limited to perlite, vermiculite, expandable glasses, micas, clay, talc,
16 borosilicates, cokes, charcoals, hard coals, brown coals, calcium carbonate,
17 cereal grains, cork, bark granules, expandable clay, foamed concrete, metal
18 sponge, pumice, tuff, and/or lava”; and

19 //

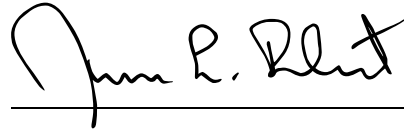
20 //

21 //

22 //

1 (4) The court DECLINES TO CONSTRUE “dispersed in a emulsion of polyvinyl
2 acetate or silicone.”

3 Dated this 17th day of April, 2019.

4
5 

6 The Honorable James L. Robart
7 U.S. District Court Judge
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22